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1938

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CHRONICLE OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

International Bibliography of Agricultural Economics. — Beginning with October 1938 the International Institute of Agriculture publishes a current bibliography, which will appear at quarterly intervals and which deals with agricultural economics in all its various phases. This bibliography, which is based on the material currently received by the Library of the Institute continues the " Internationale Bibliographie des agrarökonomischen Schrifttums " which was started in 1933 and was hitherto included in the journal " Berichte über Landwirtschaft " published under the auspices of the German Ministry of Agriculture.

The scope of the bibliography is to cover the economic and social aspects of agriculture, such as agricultural economics, agricultural policy, settlement, credit, cooperation, insurance, marketing, prices, statistics, furthermore farm organisation and management, valuation, farm labour, farm accounting, and finally allied subjects such as rural sociology, agricultural history and geography, legislation and education. Titles of all publications of original value and scientific character, whether books or pamphlets or articles in periodicals are given and all the bibliographical details required for the proper identification of the particular publication are added. All languages receive equal treatment and titles in the less known languages are provided with a translation.

The bibliography which is the only one which covers systematically the world literature on agricultural economics is carefully classified by subjects. An author index will be supplied at the end of each volume.

Joint Agricultural Advisory Committee. — On December 12 this Committee will assemble at the Institute, with the following agenda:—

(1) Activities in regard to questions of common interest between the International Institute of Agriculture and the International Labour Office.

(2) Proposed inquiry into the economic and social condition of small holders.

(3) Problem of regulating the hours of agricultural labour.

Meeting of Statisticians. — On December 1 a Committee of statisticians of the various countries interested will meet at the Institute to study the international systemization of horticultural statistics.

Nutrition. — An important aspect of the question of *Nutrition* was discussed at the *Vth International Congress on Public Hygiene* (Geneva, June 14-15-16, 1938). At the request of the Secretary General of the Congress, the Director of the Third Bureau, who at this Congress represented the International Institute of Agriculture, together with M. Wagnière (honorary member of the Permanent Committee and former delegate of Switzerland), draw up a report on the following subject: *The nutrition of rural centres.* After a detailed discussion, the Congress decided to appoint a Committee to pursue an inquiry into this question, the social importance of which is undeniable.

This question will be further examined during the collaboration of the Institute in the preparation for the European Conference on Rural Life, organised by the League of Nations in view of the desire to extend the study of problems of nutrition in regard to livestock.

PUBLICATIONS OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

IN THE PRESS:—

COTTON BREEDING AND SEED SUPPLY

This study, which supplements the *World Cotton Production and Trade*, published in 1936 by the Institute, deals with cotton breeding, including the development of breeding in certain typical producing countries.

This volume, of about 80 pages in 8°, is priced at **15 lire** (*post free*), and will prove of great utility to experts; who have not always time to follow the rapid progress of such work in the various countries.

BOOKS PRESENTED TO THE LIBRARY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Afchar, H. L'organisation du crédit rural en Iran. Paris, Librairie technique et économique, 1937. 212 p.

Agrarpolitik, eine völkische Grundwissenschaft. Vorträge der 1. Reichstagung der Reichsarbeitsgemeinschaft « Agrarpolitik und Betriebslehre » auf Burg Lauenstein vom 24. bis 26. März 1938. Neudamm, J. Neumann, 1938. 98 p. (Sonderdruck aus: " Der Forschungsdienst ").

Angelini, F. Problemi del lavoro agricolo. Roma, Unione editoriale d'Italia, [1938]. 250 p.

Bassi, E. La Battaglia del grano e della agricoltura. Con l'elenco degli agricoltori premiati nelle gare nazionali e provinciali della campagna 1936-1937. Milano, « Primi piani », 1938. 163 p.

Béguinot, A. Botanica. [Milano], V. Bompiani, 1938. VII, 421 p. (Enciclopedia scientifica monografica italiana del XX° secolo, diretta da Enrico Castelli. Serie 2ª: Scienze biologiche-naturali, n. 1).

Ciaurro, I. Bibliografia della città di Terni e del suo territorio. Terni, Stab. poligrafico Alterocca, 1938. 177 p.

Eckardt, H. von. Russia. Revised and supplemented by the author for the English edition, translated from the German by C. A. Phillips. New York, A. A. Knopf, 1933. XXIX, 711, VII p.

Evreinov, V. A. Les fruits à noyaux. Paris, Flammarion, [1938]. 185 p. (La terre. Encyclopédie paysanne, dirigée par J. Le Roy Ladurie. 7).

The radio communiqués of the International Institute of Agriculture will be transmitted between 2.45 and 2.52 p. m. on the following days: Thursday, English ***and*** German; ***Saturday***, Spanish; ***Tuesday,*** Italian ***and*** French.

They will be broadcast from Rome II (245.5 m.) and Rome 2 RO 4 (25.4 m.).

The hour of broadcasts is in Central European Time, which is one hour ahead of Greenwich Mean Time, and 5 hours ahead of Eastern Standard Time in the United States.

INTERNATIONAL BULLETIN OF PLANT PROTECTION

1938 No. 11

DISCOVERIES AND CURRENT EVENTS *

Germany: Further Records of the Colorado Beetle (*Leptinotarsa decemlineata*) †

During the period from July 7 to 19, 1938, the Colorado beetle was reported for the first time in the following areas:— St. Goar (20 communes), Neuwied (7 communes), Daun (5 communes), Bitburg (4 communes), Erbach and Kehl (3 communes each), Balingen, Bergheim, Bonn, Bühl, Donaueschingen, Geilenkirchen, Heppenheim, Jülich, Ludwigsburg, Miltenberg, Offenburg, Sinsheim, Villengen, and Wolfach (1 commune each).

For records previously made in other parts of Germany, see this *Bulletin*, 1938, No. 8, p. 169 and No. 10, p. 213.

Eritrea: Locust Movements (*Locusta migratoria migratorioides* and *Schistocerca gregaria*) §

During July 1938, from the 8th to the 31st, locust swarms were frequently reported in the territories of the Government Commissariats of Agordat, Adi Ugri and Cheren; a few insects were also observed in the Commissariats of Hamasien and Massawah.

From the 8th to about the 12th, small swarms were reported at Ugarò (Barentù), Om Ager, Barentù and Tessenei. Their general direction was south-west and north-east. Other were subsequently observed in the Tucul region (Adi Ugri).

From the 13th to the 18-19th, swarms became very numerous and large (as much as 10 km. long and 2 km. wide). These insects, which were nearing

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Biologische Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official Correspondent of the Institute.

§ Communication from Dr. Luigi M. Bologna, Chief of the Agricultural Bureau of Eritrea, Asmara, transmitted to the Institute by the Government of the Colony.

sexual maturity, were very voracious; the damage, which at first was slight, in the later days became very serious.

The swarms spread from the Tucul zone northwards toward the Ferfer Valley, and on the 18th were reported at Cheren; to the east towards Seffa and Arresa; to the south towards Mareb, passing Adi Abò. On the 12th, 13th and 14th small swarms had already been observed in Adi Abò, and on the 18th swarms from the other side of Mareb (Commissariat of Adua) recrossed the river and flew towards Zaïd Accolom.

From Barentù and Tessenei, on the 13th the swarms continued in a north-easterly direction towards Agordat and Biscia, but from the 12th to the 14th, swarms were observed in these localities going in a north-westerly direction.

From the 20th to the 22nd, very localized movements were reported.

On the 23rd, probably owing to the heavy rainfall on the highland, continuous swarms were observed moving east to west along the valley of the Ambessà and its tributaries. This movement ended on the 24th and 25th with the insects concentrating in the neighbourhood of the junction of the Ambessà and Mareb rivers (pairing).

On the 25th, the swarms continued to move west and south-west. At Om Ager a large swarm was reported leaving the territory.

From the 25th to the 30th, frequent movements were observed, though of no great importance, in the neighbourhood of Cheren, going north, north-east and north-west. The 28th and 29th, in Cohain swarms flew in different directions, towards Arresa (north-east) and Adi Abò (south-west).

* * *

From the information transmitted from the Sudan and the Commissariats of Eritrea, the examination of specimens sent to the Agricultural Bureau and deductions from the data received, it may be concluded that:—

(1) Although the reports for June 1938 on locust movements in the Anglo-Egyptian Sudan only mention swarms south of the 13th line of latitude, the Entomological Service of this Government admits the possibility of swarms much further north and further east. Hence it may be inferred that the swarms originated in the Anglo-Egyptian Sudan, crossing the frontier zone between Gasc and Setit. The predominating direction of the swarms was south-west north-east.

(2) As far as can be judged from the specimens received, the swarms were of the tropical migratory locust (*Locusta migratoria migratorioides*) as were also the swarms reported in the Anglo-Egyptian Sudan. It cannot be assumed, however, that there were no desert locusts (*Schistocerca gregaria*) as some reports indicated.

(3) The communications received for the period June 8-18 concern locusts which had not yet attained sexual maturity. Swarms of fully developed insects were observed on the 18th and 19th, the peak of the invasion.

(4) Pairing and oviposition were noted on the 25th at Mai Mehan (Dembelas) and on the 31st at Tarchinà (Barentù).

(5) The damage caused to crops (dura, maize, bultuk), to forage plants and even to spontaneous herbs was considered serious by the end of June, especially in some districts of the Commissariat of Adi Ugri (Zaïd Accolom, Mai Nabarai Valley, Mai Gehù, Sefrà Genzai, Sefrà Munzù, Scek Scek, Dembeterer), districts situated between Tucul, Adi Gultinà, Mount Dubonì and the Ambessa torrent.

(6) At no period were the swarms followed by birds.

(7) While the swarm reported on the 19th at Ghergher (Hamasien) probably came from Cheren or Seraè, the swarms observed on the 29th at Saati or Sciabbah (Massawah) and directed towards the eastern hills (Carnescim) should be considered as forming part of quite another invasion.

(8) The reports received appear to justify the theory that the locusts observed in the Tucul region originated in Barentù, rather than that they were independent groups from the other side of the Mareb (Adi Abò).

* * *

While, during the first ten days of August 1938, the locusts were reported chiefly in the low-lying plain in the west the swarms proceeding from the Sudan, and with an intensity which had never been seen in previous invasions, during the following ten days, owing to improved climatic conditions in the uplands, locusts were found mainly in the Adi Ugri zone. Although little damage was caused, egg-laying was reported in several districts.

It was noted that all the locusts had a reddish tending to yellow coloration, and as soon as favourable conditions were found pairing and oviposition took place, coloration subsequently changing to a straw-yellow shade.

The districts where the heaviest egg-laying and most numerous hatchings took place, were those of Om Ager, Tessenei, Aicota, Barentù and Darotai in the region situated between Nacfa and Adi Ugri. On the other hand, in Hamasien, locusts appeared and in some districts even paired, but without oviposition, it is thought because of the excessive humidity of the air, an unusual condition in this climate.

The Agricultural Bureau sent two competent officers, one to Tessenei and the other to Cheren, Agordat and Barentù, in order to organize control measures by means of poisoned bait and flame-throwers; whenever possible, but unfortunately only on rare occasions owing to insufficient labour, the more economic and effective method of trapping and crushing the locusts in ditches was followed.

The Agricultural Bureau has also provided for Italian foremen, after adequate instruction, to be sent to the territories of Tessenei, Agordat, Barentù and Cheren.

So far, the damage caused by this invasion is insignificant; being limited to the destruction of some pasture-lands, spontaneous herbs and a few fields of taff, and in the lowlands of the west, to dura crops.

France: The Colorado Beetle (*Leptinotarsa decemlineata*) in 1938 *

In 1938, the development of this potato pest was retarded practically everywhere by the dry spring weather. From June, however, considerable importation was evident. These were large swarms coming from different directions during the hot periods, chiefly in June (about the 8th. and 24th.) and at the beginning of August.

The territorial gains of the insect during this season comprised: (1) an advance with an increased number of infested centres towards the Channel and the North Sea; (2) an intensification of the foci along the north-eastern and eastern frontiers; (3) an extension in Alsace; (4) further advance in the Alpine valleys.

The Vosges, where the Colorado beetle had been checked in 1935, when it appeared on the western slopes, were turned in the north and the south (Belfort Pass) and the hills and valleys (Münster, St-Amarin, Massevaux) were also penetrated.

In the Alps, some beetles were found in the valleys of the Giffre up to Samoens, the Arve to Chamonix, the Isère to Montgirod and the Arc to Orelle; others were reported in the Hautes-Alpes to a little east of Gap and in the Basses-Alpes along the Bléone up to Javie and the Asse to the upper part of Barrème.

In the Var, slight infestation was observed at Aups, St-Maximin and Mazaugues. No insect was seen beyond this zone.

Southern Rhodesia: Locust Invasion, 1932-38 †

Monthly Report No. 69. August, 1938.

With the advent of warmer weather from the middle of the month onwards, greater activity has been displayed by wing swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.).

Several swarms described as medium to large have been reported. Flying swarms have been reported from the Districts of Lomagundi, Salisbury, Inyanga, Makoni, Umtali and Melsetter in Mashonaland. No reports have been received from Matabeleland.

Great variability has been observed in the direction of flight.

Italian Somaliland: Locusts §

No locusts were reported in the Colony during September, 1938.

* Communication from Dr. JEAN FEYTAUD, Professor of Zoology at the Faculty of Sciences, Director of the Entomological Station, Bordeaux, France.

† Communication from Mr. J. K. CHORLEY, Acting Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

§ Communication from Dr. LUIGI BOZZI, Chief of the Agricultural Services of Italian Somaliland, Mogadiscio, transmitted to the Institute by the Government of the Colony.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany (Anhalt). — By Notification of March 17, 1938 relative to the control of the wart disease of the potato [*Synchytrium endobioticum*], the seed tubers of the early varieties ' Erstling ' and ' Zerbster Sieben Wochen ', which are non-resistant to this disease, may only be sown after treatment to accelerate germination. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. August 1938, Bd. X, Nr. 6, S. 126).

Germany (Bavaria). — By Regulation of June 20, 1938 relating to game protection, rewards will be given for the destruction of crows and stray dogs and cats. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang August 1938, 18. Jahrg., Nr. 8, S. 77).

Germany (Hesse). — By Decree of June 22, 1938, the control of the granary weevil [*Calandra granaria*] is made compulsory for all proprietors of grain stocks and persons engaged in transformation of cereals. In this respect, all instructions given by the Plant Protection Service must be complied with. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. August 1938, Bd. X, Nr. 6, S. 128).

Germany (Prussia). — By Decree of June 22, 1938 relative to the control of the potato eelworm (*Heterodera schachti*), it is prohibited in the Sleswig district to cultivate more than a third of the fields of less than 1000 sq. metres with potatoes and tomatoes.

Potato crops and all stored potatoes are subject to inspection by the Plant Protection Service.

Potatoes harvested on lands declared infested with eelworm may not be used as seed and may not be removed from the infested farm. The tubers must be boiled before being fed to stock.

The Plant Protection Service will determine which fields are to be considered infested, and will also decide when, after infestation has ceased, the fields may be considered as healthy.

The tops and waste parts of the potato plant left on the fields must be burnt.

It is prohibited to take any manure, liquid manure and compost outside the farms declared infested. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. August 1938, Bd. X, Nr. 6, S. 129-130).

Argentine Republic. — The Decree No. 116-304 of October 11, 1938 authorizes the Department of Agriculture to reserve a certain sum to meet immediate requirements for the establishing of the Institute for locust research work [see this *Bulletin*, 1937, No. 12, p. 277]. (*Boletín Oficial de la República Argentina*, Buenos Aires, 3 de septiembre de 1938, año XLVI, núm. 13.232, pág. 11569).

Colombia. — Decree No. 1185 of July 4, 1938 lays down the regulations for the technical organization of the control of the Sigatoka banana disease [*Cercospora musae*] in the Magdalena Department. (*Diario Oficial*, Bogotá, 9 de julio de 1938, año LXXIV, núm. 23.821, pág. 56).

*** Decree No. 1391 of July 30, 1938 modifies Decree No. 1185 in the part relative to the quota to be paid by the banana-grower towards the expenses of the control of the Sigatoka disease. (*Ibid.*, 26 de agosto de 1938, núm. 23.859, pág. [397].

Italy. — The Royal Decree No. 1115 of July 6, 1938 establishes the measures of application of the Royal Decree-Law No. 278 of March 10, 1938 [see this *Bulletin*, 1938, No. 9, p. 196], relative to the control of ' mal secco ' disease of citrus [*Deuterophoma tracheiphila*] in Sicily for the 1937-38 campaign. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 30 luglio 1938, anno 79°, n. 172, pp. 3189-3190).

*** By virtue of Law No. 987 of June 18, 1931 and the modifications of the said Law relative to the protection of cultivated plants and agricultural products [see this *Bulletin*, 1931, No. 9, p. 166; 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No. 9, p. 202; 1937, No. 6, p. 125; 1938, No. 4, p. 81], by Ministerial Decree of July 12, 1938 a compulsory association has been established for the improvement and expansion of textile plants in Lecce, with headquarters at Lecce. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 16 settembre 1938, anno X, n. 18, pp. 1813-1915).

*** By another Ministerial Decree of the same date, a compulsory association has been formed for the improvement and expansion of textile plants in the Province of Ragusa, with headquarters at Ragusa. (*Ibid.*, pp. 1815-1817).

*** By Ministerial Decree of July 31, 1938, a competition has been opened, based on tests and qualifications, for the grant of two bursaries for advanced study in phytopathology at the Royal Observatory for Plant Diseases attached to the Royal Station for Fruit and Citrus Cultivation, Acireale. (*Ibid.*, pp. 1873-1874).

Latvia * — The Regulations relative to the trade in preparations for the control of plant diseases and pests and insects harmful to stored products, published on June 30, 1938, contain the following rules: —

(1) The preparations affected by these rules are enumerated in two lists published by the Ministry of Public Health, in agreement with the Ministry

* Communication from the official Correspondent of the Institute, Prof. Dr. M. EGLITIS, Phytopathological Bureau of the Riga University, Latvia.

of Agriculture; the first specifies the toxic products the sale of which has to be registered in a special book, while the second indicates the preparations for which registration is unnecessary.

(2) The preparations may only be sold in their original packing. Only the special sales office of the Chamber of Agriculture is authorized to pack the products for sale. Preparations in powder form must be wrapped in waxed paper bags which must be packed in tin or cardboard boxes.

(3) The packing of poisonous products should show an easily visible *caput mortuum* and the necessary indications on the nature of the product. Colourless preparations must be given some distinctive colour.

(4) The sale of the preparations enumerated in List 1 is restricted to the special sales office of the Chamber of Agriculture and to certain firms and pharmacies authorized by that office. These firms with the exception of the pharmacies, are required to procure a permit for the sale of toxic products which will be granted by the Pharmaceutical Administration.

(5) Persons to whom the preparations enumerated in the above-mentioned lists are delivered shall be responsible for their keeping and use.

(6) The sale of the preparations given in List 1 must be registered in a special book checked by the Pharmaceutical Administration.

(7) The registers and documents relating to the sales and stocks of the above products must be shown to the inspector of the Pharmaceutical Administration on request.

(8) The preparations mentioned in List 1 must be kept in locked cupboards, the key of which will be held by the manager of the establishment. The manager will be responsible for the application of these regulations.

(9) Shops selling food products and fodders must provvide special storage rooms for the preparations in Lists 1 and 2.

(10) In case of any infringement of these Regulations, the Pharmaceutical Administration may withdraw the dearler's permit.

(11) and (12) These rules come into force on August 1, 1938. Previous provisions are cancelled.

List 1 includes the following products: white arsenic, bichloride of mercury, calcium arsenate, calcium cyanide, sodium arsenate, sodium fluoride, nicotine, Paris green, lead arsenate.

List 2 comprises *inter alia*, carbolineum, preparations for seed disinfection, preparations containing thallium, etc.

Morocco (French Zone of). — The Vizirial Decree of July 22, 1938 (24 joumada I 1357) modifies the Vizirial Decree of September 13, 1933 (22 joumada I 1352) regulating, in the French zone of the Sherifian Empire, the import of plants utilized for packing imported products or articles [see this *Bulletin*, 1933, No. 12, pp. 275-276]. (*Bulletin Officiel*, Rabat, 23 septembre 1938, XXVII[e] année, n[o] 1352, p. 1286).

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[*Hexamermis* sp.].

ADAM, D. B. A progress report on a gummosis (dieback) disease in South Australian apricot trees. *The Journal of the Department of Agriculture of South Australia*, Adelaide, 1938, Vol. XLII, No. 1, pp. 14-29, figs. 1-7.
[Associated with the disease is a fungus whose precise systematic position has not yet been defined].

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APPEL, O. (Herausgegeben von). Handbuch der Pflanzenkenkheiten. Berlin, Verlag von Paul Parey, 1937, VI. Bd.: Pflanzenschutz. Verhütung und Bekämpfung der Pflanzenkrankheiten. 2. Lief., S. 289-576, Abb. 8-61. RM 16,60.
[For the first part of the VIth volume, see this *Bulletin*, 1937, No. 6, p. 130. The second part contains:—

A. Physikalische Bekämpfungsmassnahmen von Walter Trappmann (Fortsetzung und Schluss. S. 289-332).

B. Chemische Bekämpfungsmassnahmen von W. Trappmann, G. Hilgendorff, A. Winkelmann, W. Fischer und W. Tomaszewski.

a) Chemische Pflanzenschutzmittel (I. Anorganische Grundstoffe, II. Organische Grundstoffe, III. Beistoffe. S. 333-545).

b) Biologische Prüfung von Pflanzen- und Vorratsschutzmitteln von A. Winkelmann und H. Klinger (S. 545-563).

c) Physikalische und chemische Prüfverfahren von G. Hilgendorff und W. Fischer (S. 563-576).

Copious bibliography at the foot of nearly every page].

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[*Taphrina deformans, Venturia inaequalis, V. pirina, Sphaerotheca pannosa, Podosphaera leucotricha, Uncinula necator*].

BALDACCI, Elio. Ricerche ed esperienze sulle malattie del riso (*Oryza sativa* L.). II. Il "brusone" non parassitario del riso. *Atti dell'Istituto Botanico "Giovanni Briosi"* e *Laboratorio Crittogamico Italiano della R. Università di Pavia*, Pavia, 1938, vol. X, ser. IV[a], pp. 161-188, figg. 1-21. Letteratura citata, pp. 186-188.
[With summaries in Italian, Latin and English].

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e *Laboratorio Crittogamico Italiano della R. Università di Pavia*, Pavia, 1938, vol. X, ser. IV[a], pp. 207-216. Bibliografia, p. 216.
[With summaries in Italian, Latin and English. – *Rhizoctonia*].

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[In Polish, with title and summary also in English: 'Present status of the studies on the harmful effects of crown gall in fruit trees and on its control'].

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One of the five sections of the Congress will deal with questions relative to the control of crop pests.

Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*

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